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SOME TRIASSIC FOSSILS FROM SOUTHEASTERN ALASKA[1]

WALLACE W. ATWOOD

On the north shore of Hamilton Bay, a small re-entrant on the northwest coast of Kupreanof Island, there are rock exposures which have yielded certain Triassic fossils that may prove to be of special value in paleontologic studies.

From reports prepared by F. E. and C. W. Wright, Spencer Brooks, Kindle, and some others, it is evident that the more widespread geologic formations of southeastern Alaska outcrop in roughly parallel north-south belts; that the formations consist, in part of igneous rocks, in part of sedimentary rocks, and in part of metamorphic rocks; that most of the formations have suffered from intense deformation; that numerous intrusions of igneous rocks have occurred; and that the structural relations are exceedingly complex.

The formations included in this complex of older rocks vary in age from early Paleozoic to Triassic. They border and nearly surround the Tertiary coal basins that have thus far been located in this portion of Alaska. Detailed description of these formations as they appear at various localities may be found in the reports of the Alaskan Division of the United States Geological Survey, referred to above.

At Hamilton Bay the older rocks include some of Paleozoic age and some that are of Triassic age. They include limestones, argillites, limestone conglomerates, shales, and sandstones. Associated with these beds there is considerable basalt of a much younger age. The sedimentary beds are highly inclined and are a portion of a closely folded series of strata. They outcrop on the north shore of Hamilton Bay, and there form the northern limit of the area underlain by the Tertiary coal-bearing series.

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The limestone conglomerate in the midst of this series, outcropping at the North, near the entrance to Hamilton Bay, is a peculiar formation in that there are huge angular blocks of limestone in it associated with bowlders ranging from one to three feet in diameter. The conglomerate formation is at least 100 feet thick, and may represent an important structural division line in the Mesozoic section.

The fossil collections secured from these older formations have been examined and reported upon by Dr. T. W. Stanton, as follows:

Collection No. 4819—North side of Hamilton Bay.
Pseudomonotis subcircularis (Gabb).
Horizon, Triassic.
Collection No. 4820—Hamilton Bay, North side, a few feet below No. 4819.
Pseudomonotis subcircularis (Gabb).
Numerous immature examples of this species.
Horizon, Triassic.
Collection No. 4821—North side of Hamilton Bay from bowlder in limestone conglomerate.
Rhynchonella. 2 or 3 species.
Spiriferina? sp.

The Rhynchonellas are of Mesozoic type, but the species listed as "*Spiriferina?*" may be a Spirifer, as punctuate structure has not been detected in it.

Collection No. 4822—From another bowlder in conglomerate at same place as No. 4821.
Rhynchonella sp. same as No. 4821.
Pecten sp.
Pleuromya? sp.
Several other undetermined pelecypods.
Trachyceras? sp.
Another undetermined ammonite genus.

This lot, like No. 4821 from the same conglomerate, seems to be of Triassic age. This determination is based on the character of two fragments of ammonite in No. 4822, the character of the Rhynchonellas of which one species is identical in both lots, and the absence of characteristic Paleozoic types.

According to Mr. Atwood's determination, this conglomerate is stratigraphically between the horizons of lots 4819 and 4823, both of which are definitely determined to be Triassic. This would suggest that Nos. 4821 and 4822 may have come from concretions rather than bowlders, and that the conglomerate has no very great geological significance.

Collection No. 4823—North side of Hamilton Bay.
Halobia superba Mojsisovics?
Ceratites? sp.
Horizon, Triassic.

The pre-Tertiary formations appear to extend northward and northeastward through Kupreanof Island, but no further field-work was done in this locality on the older formations by the present writer.